

Nondeterministic evaluation of field scale-dispersivity relation

Al-Suwaiyan, M.S

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Abstract: A least-squares-based model relating field scale and dispersivity is presented. Unlike previous studies, which suggested universal lines, the present study gives a range of predicted values of dispersivity. Data from literature are subjected to regression analysis and two least-squares lines representing the upper and lower bounds for the estimated dispersivity are obtained. This method can be used to come up with an initial value and expected range for the dispersivity, which can be used in calibrating numerical models and simulating contaminant plumes.